Scientific Abstract for HVTN 060:

The development of a safe and effective prophylactic HIV-1 vaccine is a global health priority. Wyeth Research is pursuing development of a combination HIV vaccine regimen consisting of CTL multiepitope peptides (HIV CTL MEP) and facilitated DNA technology (HIV-1 *gag* DNA + *IL-12* DNA or *IL-15* DNA) platforms. It is anticipated that a combination prime/boost approach will build on the strengths of each technology and provide the desired breadth and robustness of cellular immune responses that are required to confer protective immunity. In HVTN 060, Part A, priming with HIV-1 *gag* DNA (1500 mcg) will be tested with escalating doses of human *IL-12* DNA (0, 100, 500 and 1500 mcg). In Part B, priming with HIV-1 *gag* DNA(1500 mcg) with or without *IL-12* DNA (at the maximum safe and tolerated dose from Part A) will be followed by booster vaccination(s) with HIV CTL MEP/ RC529-SE /GM-CSF or with HIV-1 *gag* DNA + *IL-12* DNA or with HIV-1 *gag* DNA alone. The multicenter, randomized, placebo-controlled, double blinded study will involve 156 HIV-uninfected healthy adult participants.

In a study in rhesus macaques, the humoral and cellular immune responses elicited by an RNA optimized SIV *gag* DNA construct were substantially enhanced by coimmunization with rhesus *IL-12* expressing plasmid DNA.

The primary objectives of the present study are:

Part A

- To evaluate the safety and tolerability of intramuscular administration of HIV-1 *gag* DNA vaccine
- To evaluate the safety and tolerability of intramuscular administration of HIV-1 *gag* DNA vaccine plus *IL-12* DNA adjuvant

Part B

- To further evaluate the safety and tolerability of intramuscular administration of HIV-1 *gag* DNA vaccine following a priming series and booster vaccinations with homologous plasmid
- To further evaluate the safety and tolerability of intramuscular administration of HIV-1 *gag* DNA vaccine plus *IL-12* DNA adjuvant as a priming series followed by booster vaccinations with homologous plasmids or HIV CTL MEP/RC529-SE/GM-CSF